

To: Foresman, Erin[Foresman.Erin@epa.gov]; Chan, Teresa[Teresa.Chan@icfi.com]; Roy, Gregg[Gregg.Roy@icfi.com]; Enos, Cassandra@DWR[Cassandra.Enos@water.ca.gov]; Centerwall, Steve[Steve.Centerwall@icfi.com]; Skophammer, Stephanie[SKOPHAMMER.STEPHANIE@EPA.GOV]
Cc: Michael Bryan[bryan@robertson-bryan.com]; Michelle Brown[michelle@robertson-bryan.com]
From: Ben Giudice
Sent: Fri 7/31/2015 4:20:08 PM
Subject: RE: Discussion with EPA on water quality questions

Thanks Erin. That is helpful. I've added a couple of notes below, and we can discuss in more detail on the call.

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From: Foresman, Erin [mailto:Foresman.Erin@epa.gov]
Sent: Friday, July 31, 2015 8:58 AM
To: Ben Giudice; Chan, Teresa; Roy, Gregg; Enos, Cassandra@DWR; Centerwall, Steve; Skophammer, Stephanie
Subject: RE: Discussion with EPA on water quality questions

Hi Ben,

I think Stephanie may have sent you the question that I sent originally to Theresa. It's not in my inbox yet though.

I was reading through the Appendix B sensitivity analysis comparing CALSIM II results to baselines and Alt 4 scenarios with and without restoration. I was wondering why there weren't any WQ results in the sensitivity analysis and was wondering how the restoration changes in definition of baseline and alternatives may affect the model predictions and differentials between baselines and alternatives. When I mentioned this

at our Friday NEPA meeting, the WaterFix team indicated that WQ sensitivity were done but not included in the SDEIS. Is that right? DSM2 data was not available to review until shortly before the draft materials needed to be turned in, so we were not able to prepare a sensitivity analysis such as was done with the CALSIM data. Our main goals in the short time we had with the updated modeling were to make sure that the new data (without 24k at ELT) didn't show significant impacts that were not present in the older data that we were presenting (that had the 24k at ELT), and also to add qualitative description of the differences where possible. The intention always was that the final document would contain the updated modeling data and we would refine the language/analysis then.

My basic question is, does including or excluding tidal restoration (24K at ELT) change estimated EC at monitoring locations like Emmaton in the Delta? Yes, including or not including restoration makes a difference to EC. The updated modeling data without 24k at ELT shows some differences at Emmaton from the data with 24k at ELT. Depending on the time of year, the EC is either slightly higher or slightly lower. Again, we reviewed this to make sure there were no new impacts. Additionally, our proposed mitigation for Emmaton took into account differences seen in the newer data. We can discuss these differences on the call. The type of sensitivity analysis at the beginning of Appendix B would have addressed that question for WQ. Since we don't have that, I put the pieces of information in the DEIS and SDEIS (that I found) that give me an idea of how tidal restoration may affect EC and other WQ elements that change with EC.

- DEIS Appendix 5A-D2 assessed the anticipated changes of tidal marsh to flows, velocities, stage and EC under three time step scenarios for 2002-2003 with historical boundary conditions. Estimates of EC at NT (14,000 acres of tidal restoration) & ELT (24,000 acres of tidal restoration) showed a reduction of EC at Emmaton by 14% and 16%, respectively, see pages 167-169. LLT shows an EC decrease of 12% at Emmaton. ("Evaluation of Tidal Marsh Restoration Effects using RMA Bay-Delta Model" BDCP-DEIRS-App5A-D2.pdf).
- Modeling for 4A and other alternatives does not include using salinity gates at Montezuma slough. It is my understanding that using the gates affects salinity at locations like Emmaton, usually increasing EC when they are closed and decreasing when they are open. How will using the gates impact EC in western Delta?
- The sensitivity analysis done in appendix 8H at the LLT suggests that removing tidal marsh habitat makes a meaningful difference on estimated EC in Suisun.

The bulleted information suggests including or excluding tidal restoration would show a meaningful difference in model results between the DEIS and SDEIS baselines and Alt 4 definitions. That is a different conclusion than the Appendix B CALSIM II comparison

among baselines and alternatives which suggests there isn't a meaningful difference between the DEIS and SDEIS baselines and Alternative 4 definitions. Whether or not the difference is meaningful I think is open for discussion. There are differences in the absolute values of the EC predicted and there are slight increases or decreases depending on time of year, as mentioned above, but the overall pattern and outcome of the modeling is consistent, and the nature of the mitigation necessary to reduce significant impacts is not substantially different.

It would be really helpful to get thoughts from the Water-Fix WQ team on this because I'm not able to read the entire document. There could be other analyses/appendices I've not read, information that I don't have, or conclusions I'm not understanding correctly or precisely.

Erin Foresman

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Schedule: M 7:30a - 4:00p; T - F 7:30a - 2:00p

From: Ben Giudice [<mailto:Ben@robertson-bryan.com>]

Sent: Friday, July 31, 2015 8:12 AM

To: Chan, Teresa; Roy, Gregg; Foresman, Erin; Enos, Cassandra@DWR; Centerwall, Steve; Skophammer, Stephanie

Subject: RE: Discussion with EPA on water quality questions

Hi all,

Erin - would it be possible to send me/us a quick list of the water quality questions we may discuss this morning so I can prepare? I know they were discussed briefly at a past meeting, but I was not in attendance.

Thanks.

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-----Original Appointment-----

From: Chan, Teresa [<mailto:Teresa.Chan@icfi.com>]

Sent: Monday, July 27, 2015 11:39 AM

To: Chan, Teresa; Roy, Gregg; foresman.erin@epa.gov; Enos, Cassandra@DWR; Centerwall, Steve; Ben Giudice; Skophammer, Stephanie

Subject: Discussion with EPA on water quality questions

When: Friday, July 31, 2015 10:45 AM-11:30 AM (UTC-08:00) Pacific Time (US & Canada).

Where: 1-877-423-6338 (passcode: 914721)